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BOSTON, JUNE, 1836.

SILK GROWING ESTABLISHMENT.

Estimate of the expenses and proceeds of a silk growing establishment, for seven years, commencing with only two hundred young trees or cuttings of the Chinese mulberry; chiefly intended to show that it may be successfully commenced and pursued without capital.

If there is a person in the world whose mind has not been warped and biased by the influence of hereditary prejudices and fashionable opinions; should that person be asked what human being is entitled to the highest veneration and esteem of his fellow beings, he would answer, the person who should devise the means to produce the greater quantity of the most palatable and nutritious food for his fellow creatures, at the least expense. Should he be farther asked, who is entitled to the next rank in public esteem, his answer would be, he whose talents produces the same effect with respect to clothing. In other words, the most exalted rank belongs to the best agriculturist: and the next to him, whose inventive genius has effected the greatest improvement in the quantity and quality of clothing at the least or a given price.

How enviable, then must be the situation of that person, in whom is united both these titles, and whose employment is, at the same time, as lucrative, as healthful, and as pleasing as it is useful to mankind.

Such an employment, with such advantages, and if well conducted, certainly and clearly entitled to such honor and respect, is now fairly presented to the people of the United States in the business of cultivating silk; and experiments have fairly shown that there is no deception in the offer, but that it may be entered into without any hazard or chance of failure. It embraces all the charms of rural husbandry, with as little of the hard labor, as is consistent with bodily health and vigor. Its agricultural department is calculated to furnish healthful and pleasant labor, and consequently, food to the indigent without servile degradation, and it furnisnes the richest and most elegant clothing that man or woman ever put on; and when fairly introduced, under the advantages which this country offers, its price will never be beyond the reach of honest industry. And besides all this, the profits it will yield will be equal to, or greater than those of any other branch of agriculture or manufacture. Who, then, would not be a silk grower,—especially when the means of engaging in it are within the reach of every one possessed of common mental and corporeal faculties, who has credit sufficient to hire an acre of ground, and that even of almost the poorest quality?

The ultimate success and perfect adaptation of the Chinese melberry to every part of this country, are now established by reports of experiments which cannot be doubted, from every quarter. It is now ascertained beyond the need of farther investigation, that it is as hardy to endure the winter's frost as the white mulberry, or almost any other fruit tree. It is ascertained that the best ground to appropriate to it, is such sandy or gravelly and hilly ground as is of little value for most

other uses,— that if seed cannot be obtained, it may be propagated equally well from cuttings, or pieces of twigs, or young branches, a few inches long, with one end stuck into the ground.

There is no industrious man in the United States, with a family and in health, who cannot hire, if he cannot buy, an acre of ground for a nursery; and having bought it he can, by exchanging work with some farmer, cause it, or a part of it, to be ploughed. If he is unable to buy young Chinese mulberry trees, and cannot procure the seed, which may for a short time to come, be rather difficult, he can easily by a little energetic persevèrance, procure two hundred cuttings, probably without paying any thing, or at most but very little. Let him commence with these, and at lowest calculation, which is perhaps more than three quarters below the truth, they will produce him a thousand the second year, and may be multiplied, from year to year, not only in the same, but in an increased ratio, as those first set out increase in size.

I will endeavor to show what may be effected by perseverance in a systematic plan, which is the only mode of proceeding with any certainty of success. I shall limit the calculation to seven years, which will be a fair beginning; after which, any one with the experience of that time, will be able to make calculations for the future. I shall set down each item in the calculation far below, and in some instances, three hundred per cent. below what fair experiments have shown may be relied on.

As it is important, at the commencement, to multiply the trees as fast as possible, I would advise to begin with about an acre of mellow, rich soil, sandy loam, which though not so good for the ultimate production of silk, is more conducive to the rapid growth of the young trees before transplanting, and is therefore best for the nursery. In this nursery, I would set the seedlings, cuttings, or other young trees, as near together as they can have room to grow the first year.

The first year, 200 cuttings, set in the spring, will afford leaves sufficient to feed about 500 worms. This number would be of no profitable use in yielding silk; but it will be well to keep them, in order to form some acquaintance with them, and to provide eggs for the next year.

The moths produced by the 500 worms, will probably be half females, and will produce about 100,000 eggs; about 15,000 of which will be wanted for the next season. Suppose 50,000 of them should be sold at 12 1-2 cents, which is one half their present price, the account for this year may stand thus:

Rent for acre, for nursery,	$5
200 cuttings, say,	2
Trouble of collecting, setting, &c.,	2
Feeding 500 worms,	$2
	$11
50,000 eggs sold, at 12 1-2 cts. per 1000,	6
Nett expense out, first year,	$4 75

SECOND YEAR.

This year, also, but little or no profit can be expected. Allowing only five cuttings or layers from each tree, which is not probably not more than one fourth of what may be produced, there will be 200 trees of last year, and one thousand propagated this year. These will afford leaves sufficient for 15,000 worms, which, besides producing eggs for next year, would yield, perhaps, a little over six pounds of silk, which, at $5 per pound, will bring $30.

The expenses and proceeds of this year may be estimated thus:

Rent of nursery,	$5
Propagating by cuttings or layers, 1000 trees,	6
Feeding 15,000 worms,	10
Reeling 6 lbs. silk,	4 50
	$25 50
Six pounds silk, at $5 per pound,	30 00
Nett gain second year,	$4 50

THIRD YEAR.

This year also, will afford but small profit. All the increase of the trees may still be retained in the nursery. From each of those set the spring before, ten at least may be taken.

For the spring of the third year, there will be 200 trees two years old, and 1000 of one year old. From each of the first, may be propagated ten, and five from each of the others, making of this year's propagation, 7000; in the whole, 8,200. If from each of the first trees, two pounds of leaves are taken, and one pound from each of the next, and 1000 pounds from the 7000 young plants, making in all 1900 pounds of leaves, these together will feed 50,000 worms, which will make twenty pounds of silk.

Statement for the third year,

Rent,	$5
Setting 7000 trees,	21
Feeding and care of 50,000 worms,	25
Reeling 20 pounds silk,	15
	$66
20 pounds silk, at $5 per pound,	$100
Nett gain third year	$34

FOURTH YEAR.

Proceeding in the same ratio for four years yet

to come, allowing each tree set the year before, by cuttings or layers, to produce five, and each over that age, ten, which is infinitely short of what can be effected, then the number of trees for the fourth year will be 55,200, the fifth year, 372,200, the sixth year, 2,500,200, and the seventh year, 16,872,200.

But as these last numbers outstrip all practical calculations within the bounds of reason, we will therefore go back to the beginning of the fourth year, which commences with 8,200 trees.

As this number will extend beyond the convenient limits of the nursery, of course it will begin transplanting the trees to the place of their destination. To effect this, I would advise to hire a piece of ground on a permanent lease, say twenty acres, and more if can be done conveniently, with the privilege of purchasing in three years.

I would prepare a part of this field, and transplant the 1,200 trees of one and two years old. These I would set in rows eight feet and six inches apart, and the trees in the row, a little short of twenty inches, or ten trees in a rod, by which arrangement an acre will contain 3,200 trees. The whole field ought to be well fenced, or at any rate, the trees protected from every kind of depredation. The trees three years old may be calculated to yield three pounds of leaves each; those of two years one and a half pounds; and those of one year half a pound; in all, 4,600 pounds without those set this year. These will feed 120,000 worms, which will yield fifty pounds of silk, which at $5 per pound, will amount to $250.

The expenses and avails this year may be set down thus:

Rent of nursery,	$5
Rent of field, twenty acres, at $2 per acre,	40
Transplanting 1,200 trees, preparing ground, &c.,	12
Attendance of worms, and reeling 50 pounds silk,	100
	$157
50 pounds of silk, at $5 per pound,	250
Nett gain fourth year,	$90

FIFTH YEAR.

The fifth year there will be 7000 trees two years old, and of course, ready for transplanting, which, with the 1,200 already transplanted, making 8,200, will occupy a little more than two and a half acres. These, with those one year old, will produce leaves enough to feed something over a million of worms, from which may be calculated on 416 pounds of silk.

Rent of nursery and field,	$42 50
Transplanting 7,000 trees,	35
Feeding and care of 1,000,000 worms	250
Reeling 416 pounds silk,	312
	$631 50
416 pounds silk, at $5 per pound	2080
Nett proceeds fifth year,	$1441 50

SIXTH YEAR.

It will be perceived that, as at the ratio at which we proceeded thus far in propagating, there will be this year untransplanted 47,000 trees of one year's growth, and 317,000 set this year; in all 364,000. These could not have room to stand in the original acre of nursery; I shall therefore suppose that the cultivator has, this year, either enriched and prepared a part of the twenty acres, in order to enlarge the nursery, or has procured a sufficient quantity of suitable ground elsewhere, in which case the yet unoccupied portion of the twenty acres may be considered an equivalent, and the rent, therefore, need not come into the account.

The sixth year will commence by transplanting the 47,000 trees two years old this spring, which with those transplanted before, will make 55,200, leaving space in the twenty acres for 8,800 more. There will then be for this year's feeding 200 trees of five years, 1,000 four years, 7,000 of three years, and 47,000 of two years. These will produce at least sixty thousand pounds of leaves, which, with what may be gathered from two hundred and twentythree thousand of one year old, will amount to one hundred thousand pounds, which will feed, at a reduced calculation, two million five hundred thousand worms, which number will make ten hundred and forty one pounds of silk, worth $5265.

Rent,	$42 50
Transplanting 47,000	235
Feeding and care of 2,500,000 worms	300
Reeling 1041 pounds silk,	520 50
Interest of cocoonery supposed to have been built last year,	210
	$1308
1041 pounds silk, at $5 per pound	5205
Nett gain sixth year,	$3897

SEVENTH YEAR.

At the season of the commencing this spring, the silk made the year before will have been sold, and after paying all expenses of the season, will have left a net gain of above three thousand dollars; and as there will be three hundred and seventeen thousand trees of two years old, if one half of them are sold at two cents each, (the purchaser being at the expense of removing them,) which

would now readily command six or eight times that price, they will amount to $3,170. By these means, there will be sufficient funds on hand to pay for the twenty acres of land, which, at thirty dollars per acre, will amount to six hundred dollars, and three thousand dollars for a cocoonery, which I shall suppose to have been built on credit the year before, together with two hundred and ten dollars interest; still leaving a balance of perhaps over two thousand dollars. I shall also suppose that in the course of the fifth season the cultivator has made a purchase of two hundred acres of land, which, if the business has been well conducted thus far, can easily bo done on a credit, to pay by instalments of one thousand dollars each, beginning after two years, and which at thirty dollars per acre, will require six instalments. If this is done, he will now be able, from the remaining avails of last season, to pay the first instalment with the interest due.

MANAGEMENT OF HORSES.

The feeding of horses is a thing which for the most part is indifferently attended to in this country, and indeed the *system of feeding* which has been adopted, is but ill calculated to preserve these noble animals in full health and unimpaired in strength and vigor of body. With many planters and farmers, nothing but corn and oats, in the whole grain are doled out from one end of the year to the other. Now these are each highly nutritious and excellent substances, and well calculated to sustain horses under long continued and laborious work, but then are they not too both too heating to the blood, and too difficult of digestion to be given without change during the whole year? Would it not be better, putting the saving out of question, to reduce those grains to something like digestible substances. Whether the horse be fed upon corn or oats, in the whole grain, they necessarily void a large portion of them in precisely the same state in which they are received into his stomach. This fact is too well established to be denied at this late day, and hence it follows that all portions of grains which are eaten by the horse and not digested, serve but to irritate the coat of his stomach, inflame his blood, and, by necessary consequences, disease the whole system. The health of a man's family is very properly said to be dependent as much upon his cook as upon any other earthly agent, whether referable to physical or atmospheric causes. Writers upon human health invariably recommend plainness of diet, moderation of eating, exercise, and general temperance, and the substances which are most earnestly commended to favor, are those which afford the most bland nutrition, and which are easiest of conversion into chyle. If these recommendations hold good with respect to human diet, we would ask are not the same general laws of nature applicable to the horse? If man lives luxuriantly and feeds upon high seasoned and luscious food, the chances are as ten to one against him that he will get the gout, or some inflammatory disease; and if he feeds upon substances difficult of digestion, he is just as sure to be visited with that worse than pestilent distemper — the dyspepsia. Ah! but would you compare the horse to man? we think we hear some one ask; and lest our motives may be mistaken, we will take the liberty of replying to the query in advance of its being solemnly put on us. We do not compare the horse to the man, but we hold it as of a truth which admits not of contradiction — that all the alimentary substances, to be profitable to the stomach of either man or horse, should be not only nutritious and bland, but should be eaten in that state in which it is best calculated to undergo the digestive process. Mastication does much to prepare the food of the horse for that operation; but the evidences which are afforded by the substances voided by this animal, incontestably show that it fails most lamentably in the performance of this highly necessary work. In England where the management of stock generally, and particularly of the horse, is reduced to a matter of science, but few intelligent feeders think of giving food to that animal in an uncrushed state; nor do they confine them to grain feeding alone, and for the assigned reason, that it is too *heating*. Potatoes and ruta baga form a part of the feed of studs of most English country gentlemen; by which means they keep their horses in better health; the occasional feeding with roots serving to open their bowels, cool their blood, determine the secretions to the surface, render the skin loose, and the hair silky and healthy. We have said that independently of the saving which is thus effected, the other reasons are sufficient to justify a resort to practice, and we would ask are not the melioration with the animal to which we have just alluded, sufficient of itself, to make it an object worthy of every consideration? We think it is, and should be rejoiced to find that our suggestions were improved upon by American horse owners, for we honestly believe that infinite good both to the master and beast would inevitably result from it.— *Farmer and Gardener.*

A chemist of the city of Durham has lately discovered by accident, that the sting (venom) of a wasp or bee is an acid which will yield to an application of powerful alkali.

Col. Rees, of Florida, owner of a plantation which was devastated by the Indians, is said to have lost $140,000—being the greatest loss sustained by any individual in the Territory.

LIME FOR MANURE.

The following is extracted from a Report of the Trustees of the Kennebec Agricultural Society.

To render our farms highly productive, we must cease to look to barn-yards for the only means of enriching them. The application of alkalies—turning in green crops, and collecting composts, must be resorted to. The recent discovery of lime, in different sections of the country, promises well for agriculture, as it is almost indispensable in raising certain crops, and valuable in any. There has been but little experience in this country in the application of lime in husbandry. In other countries it is used as a manure, both in its caustic or hot state, and in a mild state. When a sward or other substance is to be decomposed, it is applied in its caustic state. When this is not the object, it may be used in either state. If used upon plants, it must be in a mild state. It has been doubted whether lime operates as a stimulus, alterative, or food for the plant, but we think that it acts as a neutralizer of all acids, and as an alterative. Heavy liming has been tried on cold clay soils, and peats, with perfect success. In some cases 240 bushels to the acre have been used. It will be seen that this will not answer for us, unless situated in a lime district, where the refuse of the kilns can be obtained at low rates. But at the present prices every farmer should use it or a substitute; ashes as a top dressing on all his lands that do not contain calcareous matter. The sward of rich places by the road side thrown up, and lime mixed in, makes an excellent dressing for a wheat crop; if caustic when put in the stack, it will soon be mild and fit to apply to young plants. Lime is used with most beneficial effects on land abounding in copperas rock, and when applied it renders it the most productive and desirable soil. Our remarks have been confined to what is called the carbonate of lime, but when quick lime is mixed with sulphuric acid, even where the base was before, iron, it partakes of the nature of plaster of paris Plaster is sulphuric acid with lime. Copperas is sulphuric acid with iron. Plaster, which belongs to the family of lime, is a very good and cheap dressing for most land, and is indispensable to a crop of clover, which when analyzed is found to be composed in part of plaster; but we believe a cheaper and better manure may be formed of lime mixed with other substances, and we would recommend the use of it on all unproductive land as an alterative; on all wheat land as the food of wheat; for unless it is contained in the soil, or is supplied, no wheat can be raised. We have so much and so good evidence of the beneficial effects of lime in husbandry, that we hope every farmer will avail himself of the present low price of it to try experiments for himself. It is used with the best effects in England, Scotland, and in some parts of the United States. In Pennsylvania, they give eighteen cents per bushel for an inferior kind of lime, and find it profitable manure.

Lime has been used by some of our farmers in raising potatoes. They find it beneficial, not only to the potato crop, but to the succeeding crops. Its effects are visible for several years. The manner of applying it is, to put a spoonful in a hill after the potatoes are dropped and cover the lime and potatoes together. Not only is the quantity of the crop increased, but the quality is improved by it.

Potatoes have become, to a considerable extent an article of export, and may be reckoned one of the most profitable crops on farms situated near navigable waters. The South will always depend on us for a supply, if we send them a good article. Should the state do any thing to facilitate transportation by canals or rail-roads, a general benefit will be felt among the farmers from the sale of this article.

They may be raised at a very cheap rate on stubble land. A little lime to assist in decomposing the stubble, is all the manure that is necessary to ensure a good crop, and, by planting in straight drills, most of the labor may be performed by a horse. Land may be well prepared in this manner for a second crop of wheat. The lime applied to the potatoes is sufficient for the wheat, without another application.

CHOOSING SHEEP FOR BREEDING,

One of the two species of sheep, the long and the short wooled, having been chosen as most appropriate to the situation, and wool being made an object, it is most advantageous to select such flocks as are pure as possible of the species to which they belong, and not a mixture of the short and long wooled breeds, which must generally produce an inferior fleece, disadvantageous to the manufacturer. Length of staple in the long, and fineness, elasticity and closeness in the short wooled fleece, will be the best guides in this case.

Whether the wool be long or short, the carcass of the animal ought to be amply and regularly covered; it is a great defect when the belly is bare, and still greater when the wool is thin and open along the ridge of the back, admitting rain and moisture to a most susceptible part, indeed, to descend upon all parts of the body.

It is a piece of good old advice, to buy your RAMS a little before shearing time, if possible; and a very necessary modern addition to take the opportunity of purchasing at the farmer's house, while you see the animal in PURIS NATURALIBUS, and before he has been decked out and trimmed

for show by the sheep barber. A thick fleece, covering all parts with as much equality as possible, containing plenty of YOLK, or retained or inspissated perspiration, is the object. If ewes, equally well bred, can be procured, the shepherd anticipates and reaps an immediate benefit; if not, he must patiently await improvement of his wool, through the medium of the superior blood of his rams.

At shearing time, examine the bottoms of the fleece, or the lower extremity of the filaments of wool; if it be stitchy-haired, of mixed quality, or if the sheep have a coarse breech, or be not well covered, it must be rejected, as improper for a breeding stock, where it would perpetuate its defects. The quantity of yolk or grease is a good proof of the thickness of the fleece, since, by the closeness and thickness of the wool, the grease or perspirable matter of the animal is retained; hence fine, closed, curled wool has ever the greatest quantity of yolk.—*Bath Memoirs.*

ENGLISH CULTIVATION.

I had heard and read much, before I went to England of the beauty of its scenery the perfection of its roads, and of the high state of cultivation which prevails through the country. But when I came to see those things with my own eyes, I found that my previous conceptions were extremely inadequate. I cannot do justice at all, to any of those objects which interested and delighted me so much the moment I saw them.—But imagine yourself safely landed as I was, at Liverpool in the month of April. You recollect that in New England, and even much farther south, winter still lingers — that the fields are brown, the trees leafless, and the roads bad. Not so in England.—You take the coach for London. As you go out of town you are very much surprised to see a deep June vegetation, especially when you recollect that you are in the fiftyfourth degree of north latitude, and you ascribe it to some peculiar advantage of soil, or early exposure. But as you are borne rapidly along, you find other fields still more verdant. The scene opens wider. Field beyond field, and lawn beyond lawn, rises in endless perspective. The farms are regularly laid out in squares and parallelograms, of from two to forty acres; and in general are laid down as smooth and level as the roller can make them. Here is a luxuriant wheat field, and there a meadow, and next a rich pasture, and there busy preparation for putting in potatoes or turnips; and there barley or oats just shooting up from the dark and rich soil. But scarcely a rod of fence such as we meet with every where in the United States of America, do you see in your two hundred miles ride from Liverpool to London. All is hawthorn; and these hedges, which are for the most part kept neatly trimmed about the garden and farm houses, and by the road side, add more to the beauty of the country than any description had pictured upon my mind. The common method of making the hedge is this; first the ridge is thrown up, perhaps a foot above the level of the fields which are to be fenced in; when the young thorn is to be planted in two parallel rows, about a foot or eighteen inches apart. The growth is not very rapid; but when it has attained the height of four or five feet, in about as many years, it becomes so dense that no domestic animals would think of breaking through it. The leaf is small, deeply verdant, and beautifully serrated.—In the month of May these hedges are clothed with a white fragrant blossom, very much resembling that of the thorn of our own country; and it is then that the honey suckle and other wild flowers enfold their bright hues and mingle their sweetness with the hawthorn. In the hedges, trees, such as the oak, the elm, and the horse chesnut, are planted, sometimes in rows, near together, but oftener far apart, so that each one rises and waves in grandeur by itself over the humbler, but not less charming growth below. Single trees very large are sprinkled here and there in every direction, and, every now and then you catch a glimpse in the distance, of a grove or circular clump, which add not a little to the beauty of the landscape.

Let me not be understood as intending to confine my remarks to the country between Liverpool and London, as if they were richer or more highly cultivated than other parts through which I afterwards travelled, for, in truth it is less so. With the exception of the downs, and here and there a heath, what I saw of the English scenery, taken altogether, very much surpasses my expectations — not in boldness, not in grandeur — but in richness and beauty. It seemed to me I passed rapidly along, from town to town, and from city to city, more like one interminable series of gardens and pleasure grounds, than any thing else to which I could compare it. In addition to what I have already mentioned, the turretted castles and halls of the nobility and gentry; their immense parks and princely domains, sometimes embracing several miles square of fine territory, and enclosing gardens, lawns, and forests, adorned with avenues, and fishponds, and streams. All these and many other features of the island, serve to increase your admiration of what nature and taste have done for our father land.—*Dr. Humphrey's Tour.*

Agriculture aided by science, will make a little nation a great one.

All the energy of the hero, and all the science of the philosopher, may find scope in the cultivation of one farm.

SUCCESSION OF CROPS.

But however well adapted the soil and climate may be to the cultivation of any particular kind of vegetable, the former soon ceases to be productive if constantly appropriated to the culture of plants of the same or analogous species. In order that land may be cultivated successfully, various kinds of vegetables must be raised upon it in succession, and the rotation must be conducted with intelligence, that none unsuited either to the soil or climate may be introduced. It is the art of varying the crops upon the same soil, of causing different vegetables to succeed one another, and of understanding the effect of such upon the soil, that can alone establish that good order of succession which constitutes cropping.

A good system of cropping is, in my opinion, the best guarantee of success that the farmer can have; without this, all is vague, uncertain and hazardous. In order to establish this good system of cropping, a degree of knowledge is necessary, which unhappily is wanting to the greater part of our practical farmers. I shall here state certain facts and principles which may serve as guides in this important branch of agriculture.

Principle 1. All plants exhaust the soil.

Principle 2. All plants do not exhaust the soil equally.

Principle 3. Plants of different kinds do not exhaust a soil in the same manner.

Principle 4. All plants do not restore to the soil either the same quantity or the same quality of manure.

Principle 5. All plants do not foul the soil equally.

From the principles which I have just established, we may draw the following conclusions:

1st. That however well prepared a soil may be, it cannot nourish a long succession of crops without becoming exhausted.

2d. Each harvest impoverishes the soil to a certain extent, depending upon the degree of nourishment which it restores to the earth.

3d. The cultivation of spindle roots ought to succeed that of running and superficial roots.

4th. It is necessary to avoid returning too soon to the cultivation of the same or of analogous kinds of vegetables, in the same soil.

5th. It is very unwise to allow two kinds of plants, which admit of the ready growth of weeds among them to be raised in succession.

6th. Those plants that derive their principal support from the soil, should not be sown, excepting when the soil is sufficiently provided with manure.

7th. When the soil exhibits symptoms of exhaustion from successive harvests, the cultivation of those plants that restore most to the soil, must be resorted to.

These principles are confirmed by experience; they form the basis of a system of agriculture rich in its products, but more rich in its economy, by the diminution of the usual quantity of labor and manure. All cultivators ought to be governed by them, but their application must be modified by the nature of soils, and climates, and the particular wants of each locality.—*Chaptal's Chemistry.*

Lunar Influences.—A writer in the *New York Farmer* has the following remarks on the subject of the influence of the moon upon the weather.

In the course of my observation, I could not but refer at times to the remark of the Indians, the ancient inhabitants of the country of my youth, of which there were a number of them living, and that was, that after the changes of the moon, if the corners pointed up in the form of a dish, it would be dry weather that moon, but if one down and the other up, it would be rainy or wet. Although astronomical knowledge taught me that this was without foundation, still from repeated remarks, I was finally compelled to admit that there was some truth in the observation; and in process of time, was led to form the following conclusion: that is, when the moon changes in high north latitude, it is generally cold and dry; but if in extreme south latitude, warm and wet, and apt to be stormy. It may be remarked, that when the moon changes in high north latitude, it makes the figure of the corners pointing up, and in extreme south the other figure, which verifies, in a measure the truth of the old Indian's remark. Hence, although admitting that the sun and moon are the principal agents in governing the weather there seems to be other causes which at times vary their influence, so that it is still an uncertainty; but I have very rarely known it to fail that the moon in extreme south latitude, denotes warm and stormy weather, and in high north latitude, cold and dry; and if we have ever so great prospect of storms in the latter, they are apt to be of short duration. As my limits will not allow me to go farther into detail, it may suffice to remark, that if our almanack makers would give us the latitude of the moon at the full, change, and quarters, with the course she is going, whether north or south, we might foretell the weather for ourselves, or they might give it by their own judgment from the moon's latitude in probability.

A skilful agriculturist will constitute one of the mightiest bulwarks of which civil liberty can boast.

France is considered a silk growing country, yet she does not grow sufficient for her own manufactures, and it is said, annually imports raw Silk to the amount of $6,000,000

England, owing to the humidity of her climate, cannot raise the worms to advantage, and for her numerous manufacturers is obliged annually to import the raw material from other countries to the amount of $17,000,000. It is stated that we import annually of Raw Silk to the amount of about $10,000,000 and of the manufactured over sixteen millions.

Unless the United States push the culture of the Mulberry and raising of Cocoons, beyond any thing now in operation, many long years must intervene, before we can supply the demand of our own markets. Inhabiting as we do one of the best climates in the world for manufacturing silk of the best quality, instead of paying ten millions of dollars annually to other nations for the raw material, we ought to export two or three times that amount.

It is said our imports of Silk stuffs exceed our export of Bread stuffs — why is this? Only because we do not duly appreciate and improve the means we have. Let our intelligent Farmers be convinced that the silk business is profitable, and then we can hope that every exertion will be made to extend the cultivation of the mulberry and raising of Cocoons.

It is a matter of regret, that any one should view the subject as a wild project, and say, that although it may be a good business for a few years, if found lucrative, every body will engage in it, and glut and ruin the market. We wish the subject could be so presented to our fellow citizens, as to impress them with the importance of examining the subject, on the broad scale of greater national importance than any agricultural subject ever yet pursued.

But if doubts and fears shall remain, we only ask them to commence the culture of the mulberry on a limited scale for a few years, not to interfere with any other agricultural pursuit. Let the experiment be made upon some of our almost barren and useless portions of poor, dry, stony and gravelly soil.

It may be asked, if the silk business can be made more profitable than any crop, why not take the best and richest land? a fair question indeed, but such land is not best for the Chinese mulberry, and it would be desirable to have every patch of poor, waste, dry land devoted to some useful purpose.—*Northampton Cour.*

The population of Paris has quadrupled since the reign of Louis XIII. Land which was then worth 200 francs the acre, is now 1000 francs the yard.

(From the Silk Culturist.)

Roxbury, March 5th, 1836.

Mr Comstock: — Understanding that communications directed to you, on the culture of silk, will be acceptable, I offer a statement of my short experience in the business, and should it prove that I have done anything to advance the cause, I shall be amply paid for my pains. I have 1500 trees, from two to six years old, in a healthy condition, and have fed a small number of worms for three seasons past; and, after having constructed a reel expressly for the purpose, have overcome, to us, the great difficulty of reeling the silk from the cocoons, and manufacturing it into sewing silk, to our great satisfaction.

The manner in which we manage is this. We reel from twelve to twenty cocoons at a time, and put five or six skeins on the reel at once, as required for the size of the thread — from ten to twenty knots to a skein. We then take the reel from the frame and place it in a jack, in order to double it without disturbing the skeins. We then take a common quill-wheel and spool, and secure the ends from five skeins, bringing them together into one. After wetting with suds, we proceed to spool, which, when done, it is ready for spinning, &c. I am satisfied we can make a run of sewing thread from the cocoons with about the same labor as from flax.

I also constructed a box stove of sheet iron, and another of boards sufficiently large, after putting the iron one into it, to leave a space each side and bottom, of about one inch — I then filled the space with clay mortar — being a non-conductor of heat, one could set by it in the warmest weather without inconvenience. The stove-pipe to pass through a window or chimney, as most convenient. I have also invented a spinning-jenny, for the purpose of spinning, doubling, and twisting under one operation, either by hand or any other power, which I calculate to put in operation next season.

I am, &c.

Isaac G. Botsford.

P. S. The inquiry has been made, what shall be done to prevent the silk worm from being destroyed by ants? Suspend the shelves from above with wires, so that they cannot come in contact with the walls of the building, and a sure remedy may be found. I. G. B.

The last Albany Cultivator, says — "Mr Asa Carter, of Champion, Jefferson Co. has shown us a specimen of silk manufactured by his daughter, who never saw a silk worm, nor a silk reel until last summer. This is pretty good evidence that there is no great art or mystery in managing silk worms."

Premiums offered by our Agricultural Society. Silk and Mulberry.— On the greatest number of acres set with White Mulberry Trees, regard being had to the average size, age, and height of the trees, the inferiority of the soil and cash value of the same, before the first day of October, 1836, $15, 10, 5. On the greatest number of Chinese Mulberry, (Morus Multicaulis) which shall be raised from cuttings, layers, or seed, before the first day of October, 1836, 15, 10, 5. On the most extensive and best arranged orchard, of White Mulberry, for gathering and feeding Silk worms, the greatest number of worms fed thereon, and cocoons produced therefrom, the present year, 10, 7, 5. On the greatest quantity of Raw Silk made in 1836, 5, 4. On the greatest quantity of manufactured silk, made in 1836, 5, 4. On the greatest quanity of cocoons, by weight and measure, raised in 1836, 3, 2.

On Crops. *To be awarded next March.*—On the greatest quantity and weight and value of good clean Winter Wheat, from an acre of land, meaning the net value of the crop, after deducting every expense of cultivation, labor, manure, seed, and interest of the value of the land, estimating good clean wheat at 1. 50 per bushel, 6, 5, 4. On the greatest quantity and weight and value of good clean Spring Wheat, from an acre of old land, deducting all expenses, estimating good spring spring wheat at 1. 25 per bushel, 5, 4, 3. On the greatest quantity and weight and value of good Indian Corn, from an acre of old land, deducting all expenses, and estimating corn at 75 cts. per bushel, 7, 6, 5. On the greatest quantity and value of good Potatoes, for the table, from one fourth of an acre, deducting all expenses, estimating good potatoes at 35 cts. per bushel, 5. On the greatest quantity of good Wheat, raised on a farm within the limits of the society, in the year, 1836, being not less than 200 bushels, 10. On the greatest quantity of good Rye, being not less than 500 bushels, 10. On the greatest quantity of Indian Corn, being not less than 500 bushels, 10. On the greatest quantity, of Oats, being not less than 300 bushels, 10. On the greatest quantity of Beans, being not less than 100 bushels, 10. On the greatest quantity of Peas, being not less than 100 bushels, 10. On the greatest quantity of Clover seed, being not less than 25 bushels, 10. On the greatest quantity of Land reclaimed, and crops therefrom, accompanied with a written description of the management, condition, and worth of the land before and sinc reclaimed, 10.— *Northampton Cour.*

The Morus Multicaulis, (Chinese Mulberry) as sold in this town, is $5 00 a paper. A paper contains seed enough for about two thousand plants, but it is hardly probable they will all vegetate. But supposing only half do, at a year's growth they are worth 25 cents each, and can be sold readily for that money. This, it will be seen, gives $250 for what cost $5 00. A letter to Dr. Stebbins from a gentleman in this state, says —"I have now from a paper of seed sold by you two years since, 350 thrifty trees, and have put out from the same, 1200 cuttings. I have sold about $50 worth of cuttings, all from the seed of one paper." This paper cost at that time but fifty cents! Is not this conclusive demonstration?— *Ib.*

Barley.— A subscriber informs us that from a suggestion made in this paper, that he was induced to wash his barley in lime water and roll it in plaster before sowing. His expectations was realized, his crop being larger than usual, and more free from smut than any he had ever seen before. — *Gen. Far.*

We are pleased to learn that quite a number of farmers throughout our country, are *beginning* to engage in the Silk Culture. Dr Stone of this town, has transplanted this Spring 1100 or 1200 Mulberry trees from two to three years old, some of them older. The field in which he has placed them, is of a light and stony soil, such as is said to produce leaves of the best quality. There is an abundance of this kind of soil in the country, particularly in the hill towns west of here. It is hardly fit for anything but Mulberry trees, but would undoubtedly prove more profitable than the most fertile meadow land, if applied to this purpose. — *Greenfield Gaz.*

Maple Sugar. — The Maple Sugar season is over for this year. Manufacturers have pulled out the sap spouts — plugged up their trees, and can now tell us to a fraction what their luck has been. The run was not so great, we believe, as it has been some years — although about as good as ordinary. Those who commenced early enough, procured their usual quantity of sugar. Mr Stebbins, of Conway, made from 1200 to 1400 lbs. Mr Randall, of Shelburne, informs us that he manufactured over 900 lbs. besides making upwards of a barrel of molasses. Mr Spaulding, and Mr Ripley, of Montague, made upwards of 800 lbs. each. As yet, we have heard of no heavier producers about here than the above mentioned. The sugar is rather higher than usual this year. It sells from 12 to 16 cents. Maple, molasses has been sold here at $1,00 per gallon. It is *sans pareil* for puddings, &c. — *Greenfield Gaz.*

The Hartford Silk Factory flourishes. There are about 100 looms, 60 of which are occupied by pretty Yankee girls. The labor is light, the profits of the company great, and the fair hand maiden cheerful and contented. Success to the American silk manufactories.— *Conn. Aurora.*

A new method of manufacturing flutes has been invented by a Mr Catlin. Those made of wood are liable to be split. Mr Catlin avoids this defect by the following expedient: He wraps muslin and silk, coated with varnish, so tight as to become solid as wood, around an instrument of suitable size for the bore. This being withdrawn leaves the internal hollow perfectly smooth and polished. Clarionets and other instruments may be manufactured in the same way. The tone of the instrument is said to be excellent.— *Old Colony Whig.*

A French scientific journal certifies to the efficacy of common salt in fixing white wash made of lime. The water in which the lime is slacked, should be first saturated with salt.

ON THT UTILITY AND BEST METHOD OF COOKING FOOD FOR DOMESTIC ANIMALS.— This subject has engaged the attention of the practical men in Europe and in this country for many years, and it is a branch of rural economy at all times worthy the careful investigation of the farmer. The Highland Society of Scotland have, in a manner, directed the public attention to the comparative advantages of farm-stock with prepared or unprepared food, and have, by liberal premiums, induced numerous experiments to be actually made, and elicited much valuable information. The conclusions which have been drawn from these and other experiments seem to be,—

1. That a great saving, some say one half or more, is effected by cutting the dry fodder for *horses and neat cattle, and feeding it with* their provender or grain, in two or three daily messes, in mangers. Not that the food is thereby enhanced in its inherent properties but that given in this way it all tells — is all consumed, all digested, all converted into nutriment. There is comparatively none wasted, or voided, without having benefited the animal. In the ordinary mode of feeding in racks, yards, and in open fields at stacks, it is well known much is lost, from the difficulty of masticating uncut hay-straw and stalks, and from its being trodden under the feet of animals and spoilt. Much labor is besides saved to the animal, as cut food requires less mastication, and the animal enjoys a long period of rest.

2. That grain and pulse, as cattle food, is enhanced in value by being ground or bruised before it is fed out, so much as to warrant the expense of sending it to mill, and the deduction of toil. Indian corn, oats, rye, and other grain, given to farm animals in a dry, unbroken state, it must have been observed by every one, particularly when the animal is high fed, are often voided in a half or wholly undigested state, and virtually lost. This does not happen when the grain has been ground.

3. That although roots, as ruta baga, *mangel wurtzel and potatoes, are improved as fattening* materials for neat cattle, by cooking, the advantages hardly counterbelance the extra expense of labor and fuel.

4. That for working horses, cooking the roots we have enumerated, and feeding them with cut hay and straw, is of manifest advantage; and that thus fed they supersede the necessity of grain.

5. That in fattening hogs, there is decided economy in grinding and cooking food. The experiments upon this subject are many and conclusive. Some estimate the saving at one half the quantity of food.— Taking into account the various materials on a farm, which may thus be turned to account, we are satisfied that one-half the cost of making pork may in this way be saved. Swine are voracious animals, and will eat more than their stomachs can digest, unless assisted by the cooking process. There are upon the farm many refuse matters, as pumpkins, squashes, small potatoes, early and defective apples and apple pomace, which are of little value, except as hog-food, but which if well husbanded, cooked and mixed with ground provender, contribute essentially to cheapen our pork. It has been questioned whether the articles we have enumerated are nutritive to pigs, when given in their raw state; while all admit, who have made the experiment, that they are highly so when cooked. Cooking undoubtedly adds to their nutritive properties, as it does to the nutritive properties of Indian meal. —*Albany Cultivator.*

President Dwight mentions that when he lived on Greenfield Hill, he often noticed that delicate plants which were protected by a fence from the north wind, were cut off by spring frosts, while those which were more exposed were uninjured. It was observed after the frost last week, that some plants which were open to the north were saved, though the mercury was at 26 above zero.

His explanations was that the north wind drives the moisture from the plant and thus prevents i from being frozen upon it — so it would seem that in the case of what are called black as well as white frosts, it is not the juice of the plant which is frozen, but the external moisture.

Perhaps if observers compared notes on this subject something more might be known. It is desirable to get all information on a point so interesting to cultivators of gardens and orchards — for fruit is affected in a similar way.— *Springfield*

FARMERS OF VERMONT.— Some of the best and most productive farms in the country may be found in the valley of the Connecticut. Their produce in the market always commands a high price. The amount of butter, beef, and pork, sold since the first of October last, by farmers of the single town of Barnet, Caledonia county, Vt. brought the snug sum of $26,340 88. During the four months mentioned, they sold 349 head of beef cattle for $5,745; 68,147 lbs of butter for $12,876-12, and 123,525 lbs. of pork for $7,719. One farmer sold three thousand pounds of butter and the same of pork;— 1,600 lbs. of butter sold at an average of 20 cts per pound. The butter that was sold in Barnet in the month of October, averaged about a shilling per pound, while that carried to the Boston market, brought, during the same time from 22 to 26 cents—which one would think ought to pay handsomely for the cost of transportation. Another of the Barnet farmers sold 836 lbs. of butter, amounting to over two hundred and fiftysix dollars. Truly the Barnet Farmers have been living in fine clover during the past season. Several of them carried off premiums offered for the best butter by the Massachusetts Agricultural Society at their last exhibition — and one of them, the first premium of fifty dollars. We gathered these facts from a statement in the last number of the Vermont Farmer.—*Eagle.*

LAMBS.

Lambs should always be left at home when heep are to be washed, as they are saved much atigue where the distance is considerable, and many accidents incident to the pen, crowded as they are at such times; besides the advantage of having the sheep go directly home without any trouble, after washing. Ticks are very injurious to sheep of all ages, but more so to lambs, as they have the trouble of them in summer; the ticks leaving the old worms for a more secure retreat on the lambs. To destroy ticks, I take 10 or 12 lbs. of tobacco stalks for one hundred lambs, (which I buy of the tobacconist for as many pence,) and at the time I shear sheep, put it into a tub sufficiently large to dip them in, and fill it with water, and let it soak six or eight days, when I get up my lambs, mark, dock, and alter them, then dip them into the tobacco juice; this not only kills the ticks, but is serviceable to the wounds made by docking and altering, and is all the remedy I ever apply to such wounds. Dipping the lambs in that way two successive years, will destroy all the ticks in the flock.

The method of docking lambs by taking hold of the tail and cutting it off while the animal is struggling to escape is very cruel, as it leaves the bone longer than the skin, which not only makes it very sore, but induces the flies to work at it, which endangers the life of the lamb. My method is, to have a man take up the lamb, and place the tail bottom upwards on the square edge of a block; then with a large knife, I crowd the skin which is loose up to the body, and strike the knife with a hammer, which leaves nothing to impede the shears, more than cording, and is attended with less trouble. Lambs that have much wool on them, should be sheared about the pouch to prevent the blood and wool from becoming so hard as to obstruct the discharge of matter from the wound. Lambs should be weaned the last of August, and have a good chance for feed till November; then oats in the bundle two or three months as their condition may require.—*Vermont Chronicle.*

The following extract is from the 126th chapter of the revised Statntes:

"Every person who shall wilfully cut down or destroy, or shall otherwise injure any fruit-tree or other tree not his own, standing or growing for shade, ornament or other useful purpose, shall be punished by imprisonment in the county jail not exceeding one year, or by fine not exceeding one hundred dollars."

The small Birds are dying by hundreds for want of food. The insects upon which they feed, this cold weather, wont come out to be eaten.—*Northampton Cour.*

EXTRACT

From a report of the Trustees of the Kennebec co. Maine, Agricultural Society.

Wheat raising is an important business of the farmer. Much has been said and written on the subject, and without fear of saying or doing too much, we venture to say more; nothing at this time, more than to lay down some rules which one of your Trustees who has much practicable knowledge on this subject thinks important in the wheat raising business.

1st. Select good sound fully ripened seed.

2d. Mix as many kinds as will ripen together if you can get them.

3d. Exchange seed when you can get better than your own.

4th. Take seed from poorer rather than richer soil than it is to be sown upon.

5th. Wash the seed clean in cold water and scald it in hot ley, or lime it fiftyfour hours before sowing, mixing in plaster enough to render it easily sown.

6th. Sow at the rate of two bushels to the acre, two and a half is better.

7th. Sow at a proper season, that is, when your land is in proper order.

8th. At a proper time top-dress with ashes, mild lime or plaster, and if the growth be too rapid sow on salt.

We infer from the sacred writings that salt was anciently used in husbandry, and if it was good 1800 years ago, why is not now? The use of it seems to be nearly lost, but by attention to its peculiar properties it will appear that it may be applied in some cases with profit. Salt prevents putrifaction. On sandy land that has been highly manured for corn or potatoes, and is intended for small grain the following year, salt may be used with good effect. It will retard putrifaction or the rotting and evaporating process which is too rapid in such case, prevents the loss of manure and be beneficial to crops by preventing a too rapid growth.—*Maine Far.*

Corn does not come up well this year in our vicinity. Many farmers have been obliged to plant their fields a second time. The crop did not ripen well last fall, and the vegetating principle was injured in the crib by heating after it was gathered. Probably much of the seed was selected from the corn that had been thus hurt. The true way is to gather the choicest ears for seed in the field before the crop is harvested, and hang them up by themselves. We know some fields planted this Spring from seed thus selected that do not need a second planting.—Grass haying lately enjoyed several days of rainy and cloudy weather has set quite thick.—*Hampshire Gazette.*

BEET SUGAR.

The rapid increase of the culture of beets and manufacture of sugar therefrom, in France, ought to excite more inquiry in relation to the business than it does.

It seems by an article from the N. Y. Eve. Post, (published last week) that the beet sugar has nearly drove out of France the colonial sugar — that from 58 manufactories in 1828 they have increased to 400 in 1835 — and from five and a half millions of kilogram sugar, to thirtyfive millions in the same time. These facts come from the French minister, who says that he lost 17 millions of fr. (more than 5 1-4 million dollars) revenue in 1835 by the dimunition of Imported Sugar, and proposes a tax on beet sugar, (to make good the deficiency,) of $7\frac{1}{2}$ francs, (about a dollar and 41 cents) upon every 100 pounds. There is no better land in the world for the culture of the beet root, than the deep mellow soil on the banks of the Connecticut — the land that will raise the best broom corn will raise the best beets — to raise either in perfection a rich, light alluvial soil must be cultivated to let the roots and small fibres spread to the greatest width and penetrate to the greatest depth without obstruction — Will not our Hadley and Hatfield friends start in this business — they are always ahead of us in enterprize) and they will soon see the necessity of not depending wholly upon the broom corn crop — mulberry trees and the silk culture can be carried on any where, but the Connecticut Valley is the garden for Indian Corn and fat Cattle — for broom Corn as an auxiliary, and for the brush as an article of commerce — so let it be for the culture of the beet root as the greatest subsidiary to Indian corn in the fattening of cattle, and for the growth and manufacture of an article, second to none in commerce, save the staff of life itself.

We hope this subject will be taken up by the Farmers in Northampton, Hatfield and Hadley, and measures adopted to procure information in regard to the process of raising the beets and manufacturing the sugar in France; for that purpose we propose a meeting to be held in this town on the fourth day of July next, in the mean time, if a few people should get together in Hatfield and Hadley, and choose committees to attend a meeting in this town on the 4th July, that fact would be sufficient to insure a respectable meeting, the doings of which it is to be hoped would result in creating a new article of commerce from the Banks of the Connecticut.— *Hampshire Republican.*

No man who loves his family fails to take a newspaper, says a cotemporary. Very true; and no man who loves his character, fails to pay for it.

The Corn Crop.— All, or nearly all, the accounts we have published, of great products of Indian corn, agree in two particulars, viz: in not using the plough in the after culture, and in not earthing, or but slightly, the hills. These results go to demonstrate, that the *entire* roots are essential to the vigor of the crop; and that roots to enable them to perform their functions as nature designed, must be near the surface. If the roots are severed with the plough, in dressing the crop, the plant is partially exhausted in throwing out a new set near the surface, where alone they can perform all their offices. There is another material advantage in this mode of cultivating the corn crop — it saves a vast deal of manual labor.

There is another question of interest to farmers, which relates to the mode of harvesting the crop, that is, whether it is best to top the stalks, cut the whole at the ground when the grain is glazed, or cut the whole when the grain has fully ripened. We have stated the experiments of Mr Clark, of Northampton, one of the best practical farmers of our country, and of other gentlemen, showing that the grain suffers a diminution of six or eight bushels to the acre, by topping the stalks; and there seems to be no counterbalancing benefit to the fodder, unless at the expense of carrying the stalks to the borders of the field, that they may be secured before the crop is gathered, and before they become blanched and half ruined. And it is no protection against early autumnal frosts, but rather exposes unripened grain to be more injured. Hence so far as regards these two modes, all who have made a comparison, seem to concur in the opinion, that stripping the corn of its tops and leaves is a bad practice.— *Albany Cultivator.*

Simple cure for Rheumatism.— Boil a small pot full of potatoes, and bathe the part affected with the water in which the potatoes are boiled, as hot as can be applied, immediately before getting into bed. The pain will be removed, or at least gradually alleviated by next morning. The most obstinate rheumatic pains are known to have been cured by one application of this novel and simple remedy.— *Scotsman.*

Mr John Platt, of Marietta, Ohio, advertises in a paper of that place that he has succeeded in cultivating the genuine Tea Plant of China. He has, he says, raised a plant for ten years past at Marietta, and after a series of expensive experiments has been fully successful in discovering the art of dyeing and manufacturing the leaves into tea of a quality quite equal to imported Young Hyson. He offers gratuitously to furnish seed of the last year's growth to any gentleman desirous of pursuing the cultivation.— *N. Y. Cour. & Enq.*

HOEING CORN.

The object of hoeing and working the soil about corn, are, first, to destroy all weeds; and secondly, to loosen the soil at the surface, that it may the more readily absorb dews and rain which fall upon it, and prevent the evaporation of moisture, which takes place much sooner where the soil is hard, than where it is kept loose and mellow. The practice so prevalent, of deep cultivation by the plough between rows of coin is not to be recommended. If the ground has been properly prepared before planting, when not too wet, it will not need this additional loosening. After the corn has arrived at the usual size for hoeing, the soil should only be disturbed at the surface. For as the plants increase in size, they send out long fibrous thread-like roots in all directions, which branch every way and run all over the ground; and it is through these that they receive a large portion of their nourishment. To break or injure these would therefore materially retard the growth of the plants by cutting off their accustomed supply of food. And yet surprising as it may seem, a notion is very prevalent, that it is serviceable to break the roots of corn. But what should we think of such reasoning as this, were it applied to animals What should we think if it were declared to be serviceable to cattle to deprive them of their supply of food? Or as a writer somewhere asks, what would be thought of the reason of a man, who should declare it as his opinion, and practically enforce it, that the best way to fatten a bullock, is to wound his tongue, break his teeth and batter his jaws, whenever he reached forward his head for food? Why then treat plants, which, as much as animals require their proper nourishment, in the same way?

Hilling corn we would also disapprove, although it is very commonly practised. Not unfrequently in performing this operation, all the loose mellow earth is scraped away from between the rows and heaped up round the plants, forming a sort of roof about them, throwing off the rain, which runs down into the hard soil thus laid bare at the bottom of the furrows, which the first dry weather bakes to the last degree of hardness, so that the roots can receive no moisture here, and little within these artificial pyramids. A reason is assigned in favor of hilling,— that it makes the corn stand firmer and more erect, and is less liable to be broken down by the wind. This may be the case when the plants are small and do not need any such help; but when they attain a height of several feet and are loaded with leaves and ears, it must be evident that a little loose earth piled about the roots is totally insufficient for such a purpose. It is the strong bracing roots which radiate from the stock which are to support it there; and to bury these roots deep under the surface while they are growing, and thus shut out from them both heat and air, and render them weak and tender would only help to bring about the very thing we wish to prevent.

It is important to farmers that this subject be well understood; for a little knowledge may save many weary steps, and be the means of an abundant crop in the bargain. But if any farmers doubt the accuracy of our reasoning, we would request them to test it by experiment; by ploughing and hilling high one part of their corn, and using the cultivator and applying the same amount of labor in mellowing the flat surface of the other; and then measure the results.— *Yankee Far.*

Wool.— In many sections of our State, Agriculturists are turning their serious attention to the growing of Wool, with a certain prospect of a fair remuneration for the enterprise. It has been proved by experience that in this country, flocks of sheep can be doubled in a short period of time, and no doubt remains that eventually more Wool will be produced than will suffice for our own consumption. In 1831, the number of Sheep in the United States was estimated at twenty millions. Since that period the increase has been rapid, and the number at present may with safety be set down at thirty millions, producing at a fair calculation, one hundred and eight millions of pounds of washed wool. The price of wool has ranged, and is at present high, so that estimating the new clip at an average of 43 cents per pound, the total value will amount to $43,200,000. In 1830, the number of sheep raised in Great Britain, was thirtytwo millions, producing one hundred and sixty millions of lbs. of wool. In France in 1828, there were thirtytwo millions of sheep, which produced upwards of one hundred millions of lbs. of washed wool. In Prussia in 1828, the number of sheep amounted to 11,606,200, of which, upwards of 1,734,000, were merinos. The number of sheep in the state of New York, at present, is computed at full five millions; in Pennsylvania, three and a half millions, and in Vermont, one million one hundred and fifty thousand.— *Phil. Com. List.*

Interesting Experiment.— A bar of heated iron to whiteness, held against a strong current of air from the blowing apparatus of a forge, instead of cooling, as might have been expected, burned brilliantly, throwing off scintillations in every directions. The editor of the Scientific Tracts who relates the account, does not undertake to account for it: but it is evident that the additional oxygen thus forced upon the already ignited metal, promoted the continuance of the combustion, chemically, in a much greater degree than its cooling power retarded it.— *Boston Mechanic.*

ON THE FEEDING AND MANAGEMENT OF MILCH COWS.

It is of great consequence in the management of a dairy that the cows should be treated with gentleness, so that they may not be afraid of being milked, or dislike the milker. A cow will not yield her milk willingly to a person she fears, hates, or apprehends ill treatment from. Young cows in particular, may have characters for gentleness and good milkers formed by the manner in which they are treated. This truth is of much importance to all concerned in a dairy or its products, is well established and illustrated by a communication from Mr Russell Woodward, published in Memoirs of the New York Board of Agriculture, in substance as follows:—

Having formerly kept a large number of cows, I observed many amongst them dried up their milk so early in the fall that they were not profitable, while others with the same keeping, gave milk in plenty until late in the season. I likewise have often heard my neighbors observe, that some of their cows, though very good the fore part of the season dried their milk so early that they were unprofitable and they would have to put them off; I accordingly found it expedient to find out the cause, if possible; and when I brought to mind the ways that some of my young cows had been kept and milked, I attributed the cause to the milking of them the first season they gave milk; and many experiments since, I have found that young cows, the first year they gave milk may be made, with careful milking and good keeping, to give milk almost any length of time required, say from the first of May to the first of February following, and will give milk late always after, with careful milking. But if they are left to dry up early in the fall, they will be sure to dry up their milk each succeeding year, if they have a calf near the same season of the year; and nothing but extraordinary keeping will prevent it, and that but a short time. I have had them dry up their milk in August, and could not by any means make them give milk much past that time in any succeeding year. I had two heifers which had calves in April, and after getting them gentle, I set a boy to milk them for the season, (which is often done the first season on account of their having small teats:) he was careless, and dried them both up in August. Although I was satisfied I should lose the greater part of the profit of them afterwards, yet I took it upon me the following year to milk them myself and give them good feed, but to no purpose. I could not make them give milk much past the time they dried the year before. I have two cows now that were milked the first year they had calves, until near the time of their calving again, and have continued to give milk as late ever since, if we milk them.— *Gen Far.*

PRESERVING EGGS.

The present season of the year in which farmers and others should provide themselves with a stock of eggs for the season, as eggs are both cheaper and better in May and June than they are at any other season of the year. Good fresh eggs properly prepared will keep at least a yeast and have been kept much longer. Eggs dipped in varnish have been sent from India to England, and were hatched after their arrival. The great object seems to be the total exclusion of air, and the consequent evaporation of the fluids of the egg. Packed in salt, eggs sometimes keep well, the low temperature acting favorably, yet the air is not generally sufficiently excluded,—the yolk is apt to settle to the side of the shell, and the egg of course becomes worthless. Putting down in water thoroughly saturated with quick-lime is now generally adopted, and is found to be the cheapest as well as surest mode of keeping them uninjured. We have sometimes seen so much lime used as to pack close around the lower courses of eggs, and from which they could with difficulty be extricated. This is not necessary; that the water should be thoroughly impregnated with the lime is all that is required, and to secure this object, a thin layer of lime on the bottom of the vessel may be admisisble, nothing more.— *Gen. Far.*

FACTS WORTH KEEPING.

Mr Buel — Sir — In conversation with a gentleman from Saratoga county, a few days since, he communicated to me the following information, which I deem of sufficient importance to occupy a small place in your Cultivator.

He said a neighbor of his, who has a flock of sheep, has lost by death 27 out of 30 lambs and he could not account for the cause. The first symptoms of disease, are a drooping, running at the eyes, weakness in the back and loins, and losing of the use of their hinder legs, &c.

A person recommended the use of Lobelia, (*Indian Tobacco*) which he tried by turning a few of his lambs into a field where this plant was found in abundance. It was soon found by the lambs, which they ate freely, nipping it close to the ground. In a few days a perceptible difference was manifested, and they became remarkably lively, playing and gamboling about the field as though nothing had ever been the matter with them.

Having proved so salutary and beneficial to the few, he turned in the remainder, which had the same effect and all became healthy and thrifty sheep.

In order to be certain, and to test the efficacy of the plant more particularly, some of the dried Lobelia was given to some others, in the same situation, and produced the same effect.

On the qualities and preparations of Raw Silk, chiefly compiled from the Essays of Mr D'Homergue.

Silk directly from the reel is called raw silk, on account of its being in an unmanufactured state.

There are three qualities of raw silk, graduated according to their different degrees of fineness. While in that shape and until they have undergone the operations that are to fit them for the loom, they are called first, second, and third, beginning with the finest. They assume other names as soon as they have been prepared and made fit to be used by the manufacturer. Then they have ceased to be called single, organzine, and tram silk, according to their different degrees of firmness and the manner in which they have been passed through a certain machine called a mill.

Singles, or as it is termed in French, *le poil*, that is to say *hair silk*, are made of the first quality of raw silk, consequently the finest, as the name sufficiently implies. They are made of a single thread or fibre.

Organzine is the next in firmness; it is employed in weaving to make the warp of those stuffs that are made entirely of silk.

Tram silk is the coarest of the three, and is used for the wool (filling) of silk stuffs.

Of the three qualities of raw silk, of which those different threads are made, the second, that which makes organzine, is the most in demand. The silk I have extracted (says Mr D'Homergue,) from American cocoons, is of that quality. In performing those operations, I have, for the first time discovered the superior fineness of the American silk, by finding, to my great astonishment, that it required a much greater quantity of threads to produce the different qualities of raw silk above mentioned, than the cocoons of Europe. Singles or hair silk, made of the same number of threads, or fibres, as in Italy or France, would be almost impalpable and entirely unfit for use. This supremacy will give to the American raw silk a great advantage over all others.

Raw silk (continues the same writer,) is an article of commerce of great value to the countries that produce it. Great Britain imports it for the use of her manufactures from Bengal, China, Turkey and Italy, to the amount of one million eight hundred thousand pounds sterling, or $7,772,000 annually, and France imports it to the amount of 100,000,000 francs, or $18,750,000, and makes it herself to the amount of between three and four millions of dollars more.

Mr Comstock, in his practical treatise on the culture of silk, (a work which I would earnestly recommend to the perusal of every adventurer in the silk business,) concludes his article on raw silk thus:

There are, then, six different kinds of silk extracted from the cocoons by processes of various kinds, or which differ more or less from each other in the manner of using them; and all of which require not only skill and dexterity, but knowledge acquired by long practice. I shall recapitulate them in their order, according to their degrees of fineness.

1. Silk of the finest quality, or singles.
2. Silk of the second quality, or organzine.
3. Silk of the third quality, or tram silk.
4. Sewing silk of the first and second quality.
5. Cordonnet, or twist of do.
6. Feloselle, or floss silk.

The following articles, on the preparation of silk from the above mentioned "Treatise," by Mr Comstock, are adapted to proceedings upon a large scale; but they may be easily reduced to such small proportions as may be required in domestic operations.

CLEANSING SILK.

Though cleansing silk comes more appropriately within the province of the manufacturer than the culturist, yet, as the manufacture of sewing silk and twist may be profitably connected with the growing, we subjoin the method by which it is cleansed and prepared for dyeing.

Silk, as left by the worm, contains certain impurities which must be separated from it, especially when it is intended for particular kinds of fabrics. Yellow silk contains gum, coloring matter, wax, and an oil similar to the essential oils of many vegetables. White silk also contains gum, wax, and an oil slightly tinged with coloring matter, resembling the liquid in the chrysalis of the worm. By chemical experiments it has been ascertained that the amount of gum is from 23 to 24 per cent. It is dry, friable, and, when pulverized, of a yellowish red color — soluble in water. The coloring matter is resinous, but exists in a very small proportion — supposed to be from 1-58th to 1-60th per cent. The wax is hard, but brittle, and slightly colored. Its proportion is one half per cent. These substances affect the whiteness and flexibility of silk, and the process by which they are extracted is called "cleansing silk." It is also varied according to the nature and kind of the article for which it is designed.

These processes are called "ungumming," "sulphuring," and "aluming." Silk also intended to remain white, is boiled and gummed, while that intended for dyeing is boiled, but left ungummed, on the supposition that the gum has some affinity for the coloring matter with which it is to be incorporated.

The silk, intended for white, is made up into hanks by running a thread around each hank, con-

taining a number of skeins tied together. The hanks are then untied, and several of them bound together in a bundle of convenient size. This is done that the silk may be handled without becoming entangled. The silk is then prepared for ungumming, which is done by putting it in strong soapsuds. For every hundred pounds of silk take thirty pounds of soap and dissolve it in water. Cutting it into small slices will facilitate its solution. Some dyers consider fifteen pounds of soap sufficient, and think more injures the lustre of the silk.

After the soap is dissolved the kettle is filled up with fresh water, and placed over a moderate fire until it rises to the highest possible degree short of boiling heat — for should it boil it would injure the silk by making it flossy. When the bath, or suds, is ready, the hanks of silk are immersed in it, or such parts of them as the capacity of the kettle will admit, and suffered to remain until it is freed from the gum, which is determined by the whiteness and flexibility of the silk. This operation is repeated until all the parts of the hank have been immersed. After the hanks have been ungummed, the soap and water is wrung out of them and they are next to un 'ergo a process which is called bagging.

BAGGING SILK.

To bag silk, bags of strong coarse linen are prepared. They are about fifteen inches wide, and four or five feet long, and closed at the ends, with one side left open. These bags are filled with hanks of silk, laid in lengthwise, and sewed up with strong thread. These bags are put into a bath, or suds, prepared in the same manner, and with the same proportions as the former, and boiled for fifteen or twenty minutes. When the suds begins to boil over it must be checked by throwing in a little cold water. While it is boiling it must be stirred often to bring up to the surface such bags as are at the bottom of the kettle, or it will be liable to be burned. It will also produce more uniformity in boiling. This operation, it will be remembered, is to be performed when the silk is to be left white.

Silk intended for dyeing is boiled in the same manner, with this difference: the silk is continued boiling three or four hours, and the kettle occasionally filled up with water. For common colors, twenty, instead of thirty pounds are used in making the suds; but if intended to be dyed blue, iron gray, or other colors, thirty pounds is used.

After the silk is supposed to be thoroughly boiled, the bags are carefully taken out of the kettle, opened, and the silk examined. If any part remains unboiled, it must be put in and boiled again. This is ascertained by the yellow, and a certain kind of slime on such parts as have not been boiled.

A more simple method of ungumming silk, has long been practised in Connecticut, and it will doubtless answer every purpose, provided measures are taken to prevent its becoming entangled. This method is to merely boil the silk in water saturated with a small quantity of soft soap, or the lie of common wood ashes.

SULPHURING SILK.

When it is desirable to give silk a peculiar firmness, it is fumigated with brimstone. This process is called sulphuring, and is thus performed:— A high studded room or garret, without a fire place, but with doors and windows which may be thrown open at pleasure for ventilation, is chosen for the operation. The skeins of silk are hung on poles suspended from above cords, at the height of seven or eight feet from the floor. For every hundred pounds of silk, a pound and a half, or two pounds of roll brimstone is procured, placed in a chafing dish, and set on fire. The doors and windows are then closed, as are also all crevices through which the fumes of the brimstone might escape. In this situation it is left for twelve or fifteen hours, generally through one night, when the doors and windows are opened. When the room is sufficiently ventilated to admit of going into it, the silk is taken down. The process is sometimes repeated on silk designed for some uses, particularly azure whites.

ALUMING SILK.

When silk is to be dyed, it sometimes undergoes a process which is called "aluming," which is thus performed. A solution of alum water is first prepared by dissolving forty or fifty pounds of alum, in forty or fifty buckets full of water, or in about the proportion of a pound to a bucket full of water. The alum is dissolved in hot water, and then poured into the tub, or other vessel containing the cold water. In doing this, care must be taken to stir it briskly, so that it may mix; otherwise the coldness of the water might produce a crystalization or congelation, as it is termed by dyers.

The skeins of silk, after being washed and freed of the soap by beetling are strung together by a cord, care being taken that the hanks be not too much rolled up, or folded one upon another, and steeped in the alum of water, for eight or ten hours. They are then washed and wrung with the hands over the tub, that the alum water may not be lost. They are then raised in clean water and beetled again when necessary.

In aluming silk, especial care must be taken, that the skeins are not put into the alum water until it is cold, as a warm solution would destroy the lustre of the silk.